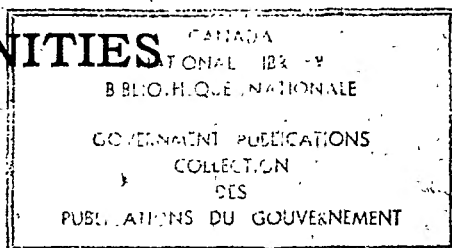


1918

THE PEACE RIVER DISTRICT CANADA

ITS RESOURCES and OPPORTUNITIES



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Department of the Interior
Canada

Hon. Arthur Meighen
Minister

W. W. Cory, C.M.G.
Deputy Minister

Issued from
Natural Resources Intelligence Branch
F. C. C. Lynch, Superintendent.

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Photo. by F. H. Kirtor, D.L.S.

Children of Sheridan Lawrence in their garden at Fort Vermilion.

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By
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Prepared under the direction of the Superintendent
Natural Resources Intelligence Branch

In the preparation of this report valuable assistance has been received from officials of the Federal Departments. Mr. Charles Camsell of the Geological Survey of Canada and Mr. C. H. Attwood of the Dominion Water Power Branch have prepared the chapters dealing with Mineral Deposits and Water Powers respectively. The Director of Experimental Farms, The Director of Forestry and the Commissioner of Dominion Parks have revised those portions of the report relating to their work. The assistance rendered by these and other authorities is gratefully acknowledged.

Department of the Interior
Canada
Hon. Arthur Meighen W. W. Cory, C.M.G.
Minister Deputy Minister

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Map showing Peace River Drainage Basin, Scale 35 miles to 1 inch. INSIDE BACK COVER.



THE PEACE RIVER DISTRICT

The Peace River District of Canada has been for many years the subject of much interest and speculation. Alluring tales from adventurous pioneers of its wonderful resources, its charming climate and varying scenery, had long since lent to the district that charm of romance which distance and uncertainty blend with glowing promises. Now the land so long famed by legend and mystery is being proved a reality. Modern transportation has brought the district to our doors, and our keen searching trials and tests are proving it to be all and more than it was represented to be. The tales were not myths; the truth was not half told, and every day added treasures of the district are being unfolded to our eyes.

This district, the drainage basin of the Peace river, lies in the northern parts of the provinces of Alberta and British Columbia. It extends approximately from latitude 54° to 59° north and from longitude 112° to 125° east, and is a part of the great Mackenzie River drainage basin. Falling away from the Rocky mountains, it embraces a part of their eastern slope, and sweeps eastward and northward over a huge plateau extending to Lake Athabaska and the Athabaska and Slave rivers.

The area of the Peace River drainage basin is over one hundred and fifteen thousand square miles, as shown in the following table:—

TABLE of Areas—Peace River District.

Province.	Square Miles (Approx.)	Acres (Approx.)
Alberta.	66,395	42,492,800
British Columbia	49,367	31,594,880
Total	115,762	74,087,680

Of this vast area, the greater part falling within the province of Alberta, especially the territory lying immediately to either side of Peace river, is proving suitable agricultural land, either for mixed farming or ranching. To this must be added a block of three and a half million acres known as "The Peace River Block," lying within the province of British Columbia and adjacent to Alberta. The balance of the British Columbia area, while containing much valuable agricultural land in various valleys, is principally a mountainous region. With those portions of the Alberta area lying at the headwaters of the various tributaries of the main river it forms a vast area of mineral and timber resources, the extent of which is only beginning to be realized.

The Peace River

The Peace river itself, beautiful and majestic, has its origin in these eastern slopes of the Rockies of northern British Columbia. It flows through mountain canyons and broad prairies for some eight hundred miles till its waters are joined by those of the mighty Athabaska, to sweep northward to Great Slave lake. This huge lake, a veritable inland ocean, feeds the Great Mackenzie river, which flows northward a thousand miles and drains an area of over half a million square miles.

Two large mountain rivers, the Finlay and the Parsnip, the one flowing southerly, the other northerly, unite their waters at Finlay Forks at the foot of mount Selwyn, towering 3,000 feet above them, and the larger river thus formed by their confluence is known as the "Peace." From this inspiring source, with an initial width of 300 feet, the Peace runs in an easterly direction through the mountains and foothills to burst forth at Hudson Hope, on the upper limit of the Peace River block, into the vast plateaus it drains.

Below Hudson Hope it widens out and flows with a uniform current through a valley cut deep across the surrounding plains. Fort St. John, British Columbia, is on its left limit in the Peace River block. Dunvegan is also on its left bank, in Alberta, and here is located a ferry where the old wagon road from Edmonton crossed to continue to lake Saskatoon. Finlay Forks, Hudson Hope, Fort St. John, and Dunvegan are still practically trading posts, but little changed from early days. But sixty miles farther down stream, the old "Peace River Landing," or "Peace River Crossing," has given way to the new thriving town of Peace River, now linked with steel to Edmonton and the "outside."

This point on the river was formerly reached from Edmonton by a two or three weeks' trying stage journey over a trail that spelt discomfort and hardship at every turn, whereas now one can travel by rail with all the comforts of dining and sleeping cars in twenty-six hours over practically the same route. From here modern steamboats ply up and down the river, a ferry crosses it, and a giant steel bridge is now being built to span it, to allow the rails to push farther west and north.

From "The Crossing," as this town is locally known, the river's course is almost due north some two hundred and fifty miles to the old historic trading post of Fort Vermilion, where another ferry has recently been provided; thence easterly again to the rapids and falls of Vermilion chutes. Navigation is here interrupted again. Below the chutes the river winds northeasterly till it is joined near the northwest end of lake Athabaska by the waters of this lake and the Athabaska river. From the confluence of these great waters the large river formed takes a new name, the "Slave," and the Peace loses its identity in the union. The Slave flows northerly to Slave lake, broken once by a series of rapids from Fitzgerald to Fort Smith, on the northerly boundary of Alberta.

It will be seen that the Peace is divided into three great sections. Above Hudson Hope it is navigable from the head of Rocky Mountain Canyon to Finlay Forks. Navigation also extends ninety miles additional up the Finlay

and some distance up the Parsnip. From Hudson Hope to Vermilion chutes large steamers ply regularly during the open season. Below the chutes the river is navigable to its mouth, from where navigation extends down the Slave as far as Fitzgerald, also on lake Athabaska and up the Athabaska river as far as Fort McMurray.

As shown in the following table, the Peace itself is some eight hundred miles in length. It varies in width from three hundred feet at its head to a mile and a half at the chutes.

TABLE of Distances*—Peace River.

Sections.	From	To	Miles (Approx.)
1....	Head (Finlay Forks)	Hudson Hope....	83
2....	Hudson Hope	Fort St. John....	51
3....	Fort St. John.....	B.C.-Alberta Boundary	34
4....	B.C.-Alberta Boundary	Dunvegan.....	83
5....	Dunvegan	Peace River (Crossing)	61
6....	Peace River (Crossing)	Mouth of Notikewin (Battle River).	96
7....	Mouth of Notikewin	Carcajou Point	59
8....	Carcajou Point	Fort Vermilion.	93
9....	Fort Vermilion.....	Vermilion Chutes	50
10....	Vermilion Chutes....	Mouth (Slave River)	188
	Total....		798

*Topographical Surveys Branch, Dept. Interior, Ottawa.

Climate

The climate of the Peace River District is excellent, and remarkably moderate considering the latitude. The air is pure and bracing: in winter clear and crisp, and in summer dry and balmy. Extremes of temperature, sudden changes, and severe storms are very rare. The winters are by no means mild, but are very dry, with clear skies, little snowfall, and few winds. Blizzards are unknown, but the mild Chinook winds occasionally sweep through the mountain passes from the warm Pacific, giving pleasing respites of balmy days to break the monotony of a steady cold. Spring comes early and quickly; the snow soon disappears, and the ground is dry in a few days. Ice on the lakes and rivers breaks up during the latter part of April or early in May. Seeding usually begins early in April, sometimes in March, and at Fort Vermilion about the first of May. Most of the rainfall occurs in June and July. The average precipitation for the full year is about twelve or thirteen inches.

The summers are remarkable for their long days and short nights. For three months there is almost continual light, the nights being merely a couple of hours semi-darkness, except when the sky is overcast. The days are

warm, but the heat is not sultry or murky. The nights are cool and conducive to rest. Summer frosts, hail-storms, or fierce winds are very rare. These are the growing days when vegetation makes its remarkable progress to compensate for a short season. The long, cool evenings are especially pleasing after the day's heat.

Harvest commences about the middle of August. September is an especially pleasant month. The days are still warm, but the nights grow colder and the flies disappear. Life in the woods is at its best during this month. October brings heavier frosts, and the ice forms late in this month or early in November. Winter can usually be expected early in November, though mild weather until Christmas is not uncommon.

The rigours of the climate need not be feared, but houses should be substantially built to withstand the cold spells. Warmly clad, a person enjoys the out-of-door life at any time during the winter. Taken the year round, the climate is healthy and pleasant, and conducive to active and vigorous outdoor life.

The following tables, taken from official meteorological records, give some interesting information obtained at different points throughout the district:—

TABLE of Meteorological Records*—Fort Vermilion.

1914-15.	Temperature.			Precipitation.		
	Highest.	Lowest.	Average.	Rainfall (Inches).	Snowfall (Inches)	Total reduced to rain
April.	46.2	16.7	31.5	0.08	.....	0.08
May	63.8	32.6	48.2	0.16	.....	0.16
June	72.1	41.7	56.9	0.66	.....	0.66
July.....	74.0	45.6	59.8	1.74	.....	1.74
August	72.4	43.1	57.8	1.80	.....	1.80
September	58.2	33.0	45.6	0.79	.....	0.79
October	47.6	24.6	36.1	0.25	.....	0.25
November	23.5	3.6	13.5	.....	8.00	0.80
December..	- 0.4	-25.8	-13.1	.....	0.50	0.05
January...	3.2	-21.8	- 9.3	.....	2.50	0.25
February	15.7	-15.3	0.3	.....	3.50	0.35
March....	33.2	1.2	17.2	.....	8.00	0.80
Total.....	.....	.....	.....	.....	.....	7.73

*Meteorological Service of Canada.

TABLE of Meteorological Records*—Fort Vermilion and Grande Prairie.

1916	Fort Vermilion.		Grande Prairie	
Month.	Average Temperature.	Precipitation in inches.	Average Temperature.	Precipitation in inches.
January...	-20°	0.40	-15°	1.20
February...	-1	0.03	16	0.30
March.....	2	1.00	17	1.23
April.....	36	0.09	40	1.31
May.....	48	0.60	48	0.22
June.....	59	2.05	57	0.41
July.....	58	4.04	56	3.98
August.....	54	0.42	56	0.47
September...	46	1.56	49	0.52
October.....	32	0.98	41	0.56
November...	11	0.28	26	0.20
December...	-15	0.80	6	1.50
Total.....		12.25	Total....	14.90

*Meteorological Service of Canada.

TABLE of Meteorological Records*—Sunshine at Fort Vermilion.

1915-16 — Months.	No. of days with sunshine.	No. of days without sunshine.	Total hours sunshine.	Average sunshine per day.
April...	28	2	222.9	7.43
May.....	25	6	254.0	8.19
June.....	30	0	357.2	11.90
July.....	28	3	326.7	10.53
August.....	28	3	305.0	9.83
September...	27	3	173.0	5.76
October.....	20	11	97.5	3.14
November...	22	8	89.7	2.99
December...	17	14	60.5	1.95
January.....	20	11	83.4	2.69
February...	27	2	161.2	5.55
March.....	23	8	156.5	5.04

*Meteorological Service of Canada.

Soil

The soil of the greater part of the district is especially suitable to the growing of grains, grasses, and vegetables. The valleys of the upper sections are very rich in river silt and black and sandy clay loams. Clay, sandy clay, and black loam, with a subsoil of the same, are the prevailing soils of the entire district. Occasional sand ridges, usually covered with jack pine, are found, but these comprise a very small percentage of the area. Some good land is covered with light muskeg or is marshy, but much of this can be easily drained. The usual run of soil is free from alkali, and well adapted to growing wheat. The district, generally speaking, is level or slightly rolling.

Very little gravelly land occurs, and field stones and small boulders are found only in restricted areas, and even there in small numbers. Generally speaking, the entire district is exceedingly fertile, the percentage of barren land being practically nothing. The district is well watered by numerous rivers and streams of pure water. Where homesteads have no stream, good water is obtained by digging or boring wells. The Fort Vermilion district is especially favoured in this respect, water being found at depths from 18 to 40 feet. In other districts it is sometimes necessary to go as deep as 60 feet, but failure to get water at this depth is unknown. Good flows are usually found at 20 to 30 feet.

Richly productive and easy to till, the soil of this district is inviting to the farmer and gardener. Bountiful yields, with a minimum of labour, tend to encourage the increase of production and maintain the quality of produce.

The lover of flowers or kitchen gardens is richly repaid for a few minutes spent in planting and caring for the house garden. Flowers and vegetables grow with a wonderful energy, and spread cheer and profit alike.

*The following is an analysis of a sample of soil taken from the prairies of Pouce Coupé:

Moisture	2.80 per cent.
Loss by ignition.	8.20 "
Insoluble	77.61 "
Oxide of iron..	3.50 "
Alumina..	5.70 "
Lime.....	0.60 "
Potash	0.81 "
Phosphoric acid	0.20 "
Nitrogen	0.44 "
Alkali..	None.

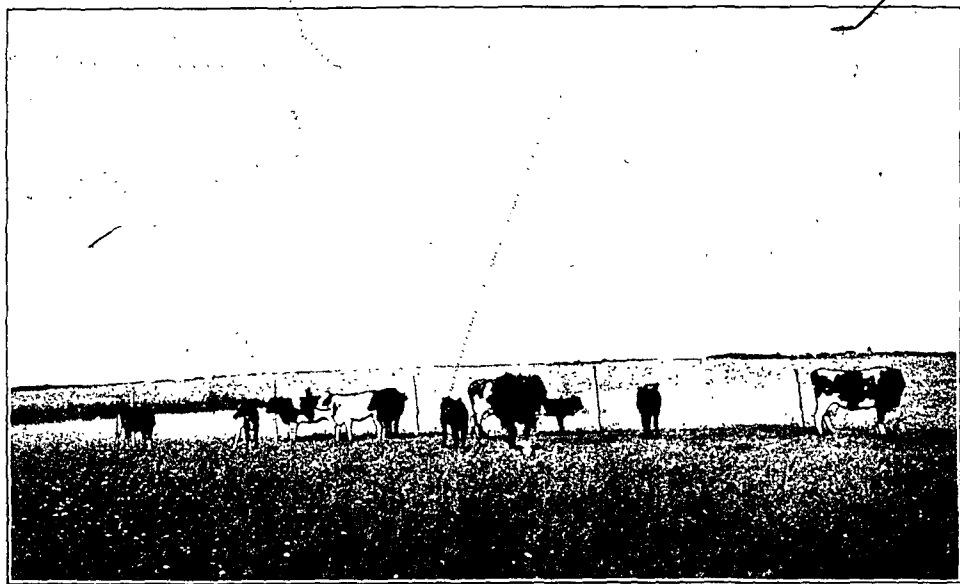
*Dept. of Lands, Victoria, B.C.

Timber

Much has been written about the vast prairies and lightly wooded sections of the Peace River District. While these are extensive, the greater portion of the district, taking into account the mountain slopes and deep valleys of its outer bound, is thickly wooded with valuable timber. The principal varieties include fir in the mountains, spruce, pine, tamarack, birch, poplar, cottonwood,



Oat Field on Grande Prairie. Photo. by F. H. KITTO, D.L.S.



Young Cattle on Summer Range at Saskatoon Lake. Photo. by F. H. KITTO, D.L.S.

and willow. The upper reaches of the district, including the mountains and foothills, are especially well wooded, but timber of good dimension is found in all the valleys throughout the entire district. Many large islands occur at intervals along the Peace, and these are all thickly wooded with fine straight spruce. Valuable timber limits on the Wapiti are yet untouched. The North and South Pine rivers, the Smoky, the Whitemud, and the Notikewin (Battle) are well wooded; while farther east and north the Wabiskaw contains millions of feet of untouched timber. At Fort Vermilion there are three saw-mills, with planing and shingle machines, and all building material required there is cut and manufactured locally. Peace River is well supplied with mills, and others are being installed throughout the district as required.

With the continued settlement and opening up of the district, the lumbering industry will assume greater proportions. While the hard woods and more valuable specimens of softer woods are not generally found, the wealth of the forests is still very great. Spruce is extensively used for lumber. Other woods yield logs for building, fencing material, ties, mine timbers, and fuel. Much pulpwood is available. Extensive forests of beautiful white poplar also exist. Except on the open prairies, a sufficient supply of timber is found to meet all the requirements of the settler for many years.

Mineral Deposits*

*By CHARLES CAMSELL, B. Sc.

Geological Survey of Canada.

Prospecting for mineral deposits in the basin of Peace river has nowhere been of an intensive character, and by far the greater portion of the basin has never been visited by the prospector. Both metallic and non-metallic deposits are, however, known to occur in considerable quantities, the former in the region west of the Rocky mountains, namely, in the basins of Finlay and Omineca rivers, and the latter in the eastern slope of the Rockies and the region to the east of them.

The great rush of placer miners into the Caribou gold fields in 1860 led to the discovery of gold on the Parsnip river in 1861, and in the following year on the Finlay. Soon after this the famous Omineca fields were discovered, which, in their history, have yielded about 'one million dollars' worth of gold. The easy rich diggings of this field were, however, exhausted in a few years, and the miners gradually pushed their way down stream, working bars on the Peace and its tributaries wherever they found pay rich enough to stand the high cost of mining. Bars were worked as far down as Hudson Hope and even to the mouth of Battle river, but the gold was found to become finer as distance from the mountains increased. Very fine gold has been carried as far down stream as Fort Vermilion, but the difficulty of recovering this is too great to make it worth while mining. Placer mining is still being carried on in the

upper waters of the Peace river, but the total production is comparatively small, and until transportation is provided that will allow the large-scale operations of dredging or hydraulicking to be carried on, a larger yield is not to be expected.

Gold quartz veins occur at mount Selwyn and on Omineca river, and large veins of silver-bearing galena have been known for many years near Manson. No actual lode mining has, however, yet been undertaken.

Seams of coal are exposed in Rocky Mountain Canyon above Hudson Hope, and, though only two to three feet in thickness, are of excellent quality and higher grade than most of the Western Canadian coals. Coal measures also outcrop to the south on Pine river, and on the headwaters of Smoky river, and contain coals which have been classed as bituminous and, in one or two of the seams, as anthracite. The possible area of these fields, therefore, is large, and the quality of the coals indicate that this is one of the most important coal fields of Western Canada. Lower grade coal has been found lower down Peace river at the town of Peace River and on Red Willow river.

Springs of natural gas and tar rising to the surface at several points in the valley of Peace river suggest that reservoirs of both these substances exist at depth in the rocks below. Drilling has been undertaken at two or three points to tap these reservoirs, and in a well near Peace river a heavy flow of gas was struck at a little over 1,000 feet in depth. Some heavy oil was also obtained which, by pumping, would amount to a few barrels daily.

Beds of gypsum, ten to fifty feet in thickness, are exposed on both banks of Peace river near Peace point for a distance of 15 miles, and it has been estimated that there are over 217,000,000 tons of this material adjacent to the river, much of it very favourably situated for mining. Salt is associated with the gypsum in the country north of Peace point, and some hopes have been entertained for the finding of potash in association with the salt and gypsum, as it is in certain parts of the world.

While all the mineral deposits of the Peace River District are still in an undeveloped state, it has been fairly satisfactorily proved that there is a large amount of coal, gas, and gypsum, and the settlers of that district can be assured of an adequate supply of coal and gas for fuel and power, and of gypsum for building purposes, as soon as there is sufficient demand to warrant the development of these deposits.

Two samples of coal from near Hudson Hope, and a sample of crude oil from the McArthur well near Peace river, were submitted to the Director of the Mines Branch, Department of Mines, for examination. The reports of analyses made by the Chief Engineering Chemist of the Division of Fuels and Fuel Testing of this branch are shown following:—

The Peace River District.

I. REPORT OF ANALYSIS.

OTTAWA, January 7, 1918.

SAMPLES of Coal collected beside tributary streams of Peace River, near Hudson Hope, B.C.

Sample mark...	" Gethings "		" Carbon "	
	1212		1213	
Laboratory sample number.	R.	D.	R.	D.
Moisture condition of sample (see note)				
Approximate Analysis.				
Moisture	1.6		1.5	
Ash.	2.9	3.0	2.1	2.1
Volatile matter	25.1	25.5	20.5	20.8
Fixed carbon (by difference)	70.4	71.5	75.9	77.1
Fuel ratio, fixed carbon-volatile matter.	2.80	2.80	3.70	3.70
Coking properties....	Forms fair coke.		Barely agglomerates	

Remarks. --

1212--From Gethings creek.

1213--From Carbon river.

NOTE. -- Figures in column " R " refer to fuel as received, and in column " D " to fuel dried at 105° C. The analyses were made on the fuel as received, and other results calculated therefrom.

E. STANSFIELD, Chief Engineering Chemist

II. REPORT OF ANALYSIS.

OTTAWA, January 3, 1918

1218--

Crude Petroleum--sample taken 14 miles below town of Peace River, 50 feet from edge of cut bank. Received December 3, 1917.

The sample was a black, very viscous oil, with an odour resembling kerosene.

Water which had separated on standing was neglected in the subsequent examination.

(a) Specific gravity at 15.6° C (60° F.) 0.987

(b) Distillation Tests--

1. As the oil contained considerable quantity of water, and direct distillation was difficult on account of frothing, the crude oil was diluted with xylene and distilled, the xylene in the distillate being neglected. A 500-c.c. distilling flask was used, and the distillation was carried out by the continuous method.

The results of the distillation were as follows:--

	Per cent by Volume.	Nature of Product.
Water	3.5%	
Below 150° C.	0.0	(naphtha)
150-300° C.	10.4%	Burning oils
Residue (by difference).	86.1%	Lubricating oils, coke, etc.

2. A second distillation was made to determine whether the quantity of lubricating oils which could be obtained from the crude oil was considerable.

The procedure was as in (b) (1), until the temperature of 300° C. was reached. The thermometer was then rapidly removed, and an ordinary cork inserted in its place. A fresh, weighed receiver was placed to receive the distillate, and the distillation was carried out rapidly until only coke was left in the flask. By this method the amount of heavy oil obtained was equivalent to 53 per cent weight, of the original oil.

	Per cent by weight.
(c) Sulphur in crude oil.	4.0
(d) Paraffin wax in crude oil...	0.9
(e) Asphalt, insoluble in alcohol-ether (1:2).	8.4
(f) Impurities (mineral matter)	1.5

E. STANSFIELD, Chief Engineering Chemist.

Fur

Since the feet of the white man first trod this district it has been a continual source of wealth in fur and game. Over one hundred years ago the Northwest Company and the Hudson's Bay Company were rivals for the trade, and to-day their old posts still remain in active operation. These rival companies long since united and continued as the Hudson's Bay Company. The Revillon Company then invaded the territory, and have posts scattered throughout the district; while, more recently, other fur-buying concerns have been attracted to the field and their posts have sprung up in various places. The buffalo of early days provided both meat and robes, and there still roams the northern parts of this district a small band of wood buffalo, survivors of the majestic herds of yore. Moose, deer, and bear are now the larger animals hunted, while smaller fur-bearing animals produce more profit from their skins than did the buffalo in their time. The Beaver, Slavey and Chipewyan Indian tribes live almost entirely from the chase, eating the meat and trading the fur, while the Crees and half-breeds usually prefer to make their living by trapping than by following farming or other pursuits. In fact, so profitable has trapping become in late years, that many of these people have given up promising farms to return to their old haunts, which barely yielded a living a few years ago. These abandoned farms may be seen in the Fort Vermilion district; the farms are good, but the fur business is better, according to the Indian opinion. Many white men also engage solely in trapping. Besides these regular trappers, great numbers of settlers find in their spare time during the winter that they can derive considerable revenue from this source, and the homesteader's boy attains ready pocket money and endless adventure from his own enterprise in this line.

An indication of the variety and quantity of fur taken will be obtained from the following table, which shows one season's catch in one small district:

REPORT of the Fur Season in the Fort St. John District, British Columbia Season 1916-17*.

Variety.	Number.
Bear.....	32
Beaver.....	246
Coyote.....	727
Ermine.....	593
Fisher.....	34
Fox, Cross.....	111
Fox, Red.....	203
Fox Silver.....	30
Lynx.....	234
Marten.....	293
Mink.....	74
Muskrat.....	901
Otter.....	2
Skunk.....	19
Wolverine.....	15
Wolf.....	5
Total.....	3,519

*Chief Game Warden, Vancouver, B.C.

Fish and Game

While the district abounds in fur-bearing animals, it is not so lavishly provided with fish. The mountain streams, however, contain trout. Moberly lake, though small, is well stocked with whitefish, as is also Sturgeon lake. Peace river produces a few fish, chiefly ling and gold eyes. The Caribou lakes, north of Fort Vermilion, teem with large trout and whitefish, and will yield enormous quantities. As yet these lakes are difficult of access. The Wabiskaw and Peerless lakes are also well stocked, but lie in a district remote from settlement.

In feathered game, wild ducks, geese, swans, and waxies are plentiful. These are especially abundant on the Hay lakes northwest of Fort Vermilion, and on the lower Peace and Athabaska. In the fall of the year they gather in flocks of thousands, and the Indians kill great numbers and hang them up to freeze for winter use. Prairie chickens and partridges are found throughout the district, but are not numerous and are being protected by the provincial Governments.

Moose and woodland caribou are fairly plentiful, but other deer are rarely seen. Wolves, bears, coyotes, and foxes afford exciting chase for the sportsman and an opportunity at the same time to rid the settlers' farmyards of invaders.

Water-powers*

Many misleading statements have been published relating to the vast amount of power available on the Peace river. This river, from the canyon in British Columbia to Vermilion chutes in Alberta, a distance of approximately 500 miles, is a wide swift river flowing over a sand or gravel bed, generally shallow, and through a deep valley, with gently sloping sides. The river is a mountain stream, as are many of its tributaries, and as a result the flow is very irregular, varying as much as 50 to 1 between high and low water, with the floods occurring during the summer months and the low flow during the winter.

On the Peace river there are two possible power sites: one in the headwaters at the canyon, and the other at Vermilion chutes.

The canyon site has not yet been investigated by the department's power engineers, and while the total fall through the canyon, which is about 18 miles in length, is reported to be between 225 and 275 feet, it is not known how much of the total head can be developed. In any event, a power development at this site will be an expensive undertaking, and can only be accomplished when a market for the power is available close at hand.

The Vermilion chutes site has been surveyed and investigated by the department's power engineers. The river at this site averages one mile in width, and takes a drop of 30 feet in a distance of 2 miles. The fall is concentrated chiefly at two points; the first or upper fall being in the form of a

*Data for the section on water-power were prepared by C. H. Attwood of the Dominion Water Power Branch Chief Engineer in charge of the Alberta and Saskatchewan power surveys.

rapid, half a mile in length, with a total drop of 11 feet. The second drop is situated one and a half miles below the rapid, and is an abrupt drop of 13 feet over a limestone ledge, and is commonly called the "chutes."

At the "chutes" both river banks are low, and an effective head of 30 feet is about all that can be obtained. The continuous 24-hour power available, based on one season's discharge records, amounts to 19,100 horse-power. For nine months of the year possibly 27,300 horse-power can be developed.

The possibility of developing small blocks of power on the tributaries of the Peace has not been definitely investigated by the department's engineers. Of these tributaries, the Pine, North Pine, and Smoky rivers have their sources in the mountains and foothills and are fed by the melting snows in the mountains during the summer months and have only a small run-off during the winter. The Moberly, Pouce Coupé, and Bear creek, together with the tributaries below Peace River Crossing, depend upon the precipitation, are subject to floods during the spring and summer months, and have a very small flow during the winter. Further investigations may, however, reveal the possibility of storing and conserving the flood waters on many of these streams. In such an event, these streams will be capable of producing sufficient power to operate small mills, and in some cases supply the power demands of a small municipality.

The inherent disadvantages of the Peace river and its tributaries as a source of power at the present time are:—

1. The irregularity of flow.
2. High cost of development.
3. Absence of market.



These disadvantages may, however, be overcome by:—

1. The creation of storage reservoirs to regulate the flow.
2. By settlement in the district. As the district becomes thickly populated and towns spring up transportation facilities will be greatly improved and a market created for the power.

Transportation

The Peace River District may now be reached in comfort and despatch by modern means of travel, being connected by rail with Edmonton, the capital of Alberta. Peace River, Spirit River, and Grande Prairie are served by the railway and further construction is in progress. In addition, those districts adjacent to the river have the benefit of a steamboat service during the months of navigation.

The Edmonton, Dunvegan and British Columbia railway runs northerly from Edmonton to Smith, the first divisional point, where the Athabaska river is crossed. Swinging westerly, it follows the Lesser Slave river and skirts the southern shore of Lesser Slave lake, famous for its yields of whitefish.

High Prairie is on the line of steel at the westerly end of this lake, and marks the approximate divide between the Athabaska and Peace watersheds.

The railway then runs more northerly to the next divisional point, McLennan. From McLennan the Central Canada railway runs northerly to Peace river, reaching the edge of the valley at a point overlooking the junction of the Peace and Smoky rivers and affording the traveller an excellent bird's-eye view of the town nestling in the valley several hundred feet below. A long descent on a side-hill grade brings one into the valley and to the edge of the waters of the Peace itself.

From McLennan the main line of the Edmonton, Dunvegan and British Columbia extends westerly, crossing the Smoky river and continuing to Spirit River settlement. Location has been carried still west as far as Pouce Coupé, and it is only a matter of time until the steel will be laid across this prairie and thence through the mountain passes to give an outlet to the Pacific coast.

From Spirit River a branch runs southerly to Grande Prairie, a new town which has sprung up in the heart of the great prairie whose name it bears, and which has been settled so rapidly in recent years.

At present a train service is maintained on all these lines, from Edmonton and return, twice a week. Traffic is already becoming so heavy that a daily train service is probably not far distant. Stockyards and elevators are in evidence, and an efficient freight service is maintained.

Distances are shown on the following table:—

TABLE of Railway Distances.

Edmonton, Dunvegan and British Columbia.

From.	To.	Miles.
Edmonton.	Smith.	130.8
Smith.	High Prairie.	103.5
High Prairie	McLennan	27.9
McLennan.	Smoky	32.0
Smoky	Spirit River.	63.0
Spirit River.	Grande Prairie	49.8

Central Canada.

McLennan.	Reno.	23.8
Reno.	Peace River.	24.7

Total Distances.

Edmonton.	McLennan.	262.2
Edmonton.	Peace River.	310.7
Edmonton.	Spirit River.	357.2
Edmonton.	Grande Prairie.	407.0

The principal boats plying on the river are shown in the following table. These provide practically a weekly service during the summer.

BOATS on the Peace River.

Boat.	Owners.	Descriptions.
" D. A. Thomas "	Peace River Development Corporation. Transport Department.	Stern wheel steamer. Capacity 250 passengers, 300 tons freight.
" Athabasca "	Hudson's Bay Company.	Stern wheel steamer.
" Northland Call "	Peace River Navigation Co., Ltd	Stern wheel steamer.
" Lady Mackworth "	Peace River Development Corporation—Transport Department.	Twin Screw gasoline launch.
" Pine Pass "	Peace River Navigation Co., Ltd	Gasoline river Boat.

Highways are being rapidly constructed and improved. Bridges have been provided for smaller rivers, and ferries for the Peace at Dunvegan, Peace River, and Fort Vermilion. Auto liveryes ply regularly between Peace River, Dunvegan and Spirit River, also between Spirit River, Grande Prairie, and Saskatoon lake and Spirit River and Pouce Coupé. These roads and trails, being chiefly on the prairies, are easily made and kept in good condition.

Communication

By the construction of a telegraph line from Edmonton to Peace River the Dominion Government has overcome that dread of isolation which kept many a prospective settler from entering this district at an earlier date. The farmer of to-day is a business man, and demands means of speedy communication regarding his business affairs. Especially do women, willing to brave other privations of a pioneer life, shrink from being cut off from ready means of communication with their distant friends, or from the current news of the day. Provision has been made to meet these demands, the Dominion Government supplying an efficient telegraph and mail service. In addition, the Government of Alberta owns and operates a rural telephone system throughout the province, the extension of which follows closely upon the opening of new districts.

Mail is carried by the railway twice a week from Edmonton to McLennan, Peace River, Spirit River, and Grande Prairie. From railway points it is distributed by carrier to various post offices throughout the district. Already about fifty offices have been opened, and the mail service is constantly being extended and improved to keep pace with the growth of the country.

The Dominion Government telegraph line from Edmonton to Peace River has been extended westerly to Dunvegan, Grande Prairie, Fort St. John, Hudson Hope, and intermediate points, comprising in all 710 miles of line. The following table shows the stations thereon:—

PEACE River Telegraph Line.

Office.	Province.	Service.
Edmonton.	Alberta.	Operator.
Halfway Lake.	"	"
Athabaska.	"	"
Mirror Landing	"	"
Sawridge	"	"
Swan River.	"	Telephone from Faust.
Faust	"	Operator.
Indiana	"	Telephone from Faust.
Grouard.	"	Operator.
Peace River.	"	"
Waterhole	"	Telephone from Dunvegan.
Dunvegan	"	Operator.
Spirit River.	"	"
Grande Prairie	"	"
Lake Saskatoon	"	"
Beaverlodge	"	"
Pouce Coupé.	British Columbia.	"
Fort St. John.	"	"
Halfway River.	"	Repair Station.
Hudson Hope	"	Operator.

Education and Social Life

The Public School system of Alberta applies to all settled portions of the province, and provides free and competent instruction to all children. The provincial Department of Education is very much alive to the child's intellectual and educational welfare. As soon as eight children can be assembled in any district a suitable building is provided and a competent teacher engaged to carry on the work of instruction, as outlined by the department, under proper inspection and supervision. In the towns and larger villages, high-school studies are included in the curriculum. At Peace River and Grande Prairie arrangements have been completed to carry the work up as far as matriculation, so that the boy or girl may be prepared to enter upon his or her college course without finding it necessary to leave home for intermediate studies. Some sixty schools are now open throughout the district. The average daily attendance for the year 1917 at Peace River town school was about sixty, while the attendance of purely rural schools is somewhat higher than in many older-settled districts. The following table shows the growth of the schools in this district:—

PUBLIC Schools of Peace River District.

Year.	No. Schools established.	Year.	No. Schools established.
1910....	2	1914.	6
1911....	4	1915.	11
1912....	7	1916.	10
1913....	2	1917.	18
Total.			60

Religious denominations are well represented. The Church of England and the Roman Catholic church have been very active during the past quarter century in mission work, and have established mission schools among the Indians at Fort Vermilion, Shaftesbury, Dunvegan, Lake Saskatoon, and Flying Shot lake. Methodist and Presbyterian churches have been established at principal points, in many instances concrete examples of Union being manifest. Other denominations and societies are found throughout the district.

Fraternal and benefit societies are opening lodges in principal towns. Peace River, Spirit River, and Grande Prairie have live Boards of Trade eager to assist the welfare of the town and to welcome the newcomer. Agricultural societies have been formed at various local districts and annual fairs are held.

Two weekly newspapers are published at Peace River, one at Grande Prairie, one at Spirit River, one at Clairmont, and one at Lake Saskatoon. The ever-popular motion-picture theatre has made its appearance in the principal towns. Boards of Trade, Farmers' Associations, Women's Institutes, Fraternal Societies, Athletic Clubs, and other institutions tend to keep alive the spirit of an-optimistic people. Hospitals are established in Peace River and Grande Prairie.

Except in remote corners the settler need not feel at all isolated. It has always been noticeable that in pioneer sections social barriers are cast down, and a spirit of equality and brotherhood is more evident than in older-settled parts. Peace river is no exception to this rule, and the new-comer finds welcome and ready assistance from those with whom he comes in contact, and rapidly makes new and staunch friends.

The British Columbia Section

That part of the Peace River District falling within the province of British Columbia, and exclusive of the "Peace River Block," comprises the portion controlled by the Government of that province so far as ungranted public land is concerned. It is practically embraced in the "Peace River Land Recording District," the recording office of which is located at Fort George. This might be called the mountain section of Peace river, and is divided from the plains section by the Rocky Mountain canyon, which at Hudson Hope forms an interruption to navigation. It includes the valley of the Peace, from this point to its head; also the great valleys of the Finlay and Parsnip rivers, together

with the valleys of their many tributaries. Much of this section is still unexplored, but many millions of acres of fertile land are known to lie in its valleys, and untold mineral wealth remains beneath its hills.

Small settlements are found about the various trading posts and mining camps, of which the principal are Finlay Forks, at the junction of the Finlay and Parsnip rivers; Fort Grahame, on Finlay river; Fort McLeod, on McLeod lake; and some camps on the Omenica. As yet the district is difficult of access and remote from civilization and markets. The nature of the country is generally rugged and the climate severe. The Omenica miners travelled over a pack route from Hazelton. An easier canoe route is now available from Fort George, but much the easier way is from Hudson Hope, which point can be reached by rail and river steamboat from Edmonton in three days. The Rocky Mountain canyon is passed by a 14-mile wagon road leading from Hudson Hope to the site of old Rocky Mountain House, which once stood at the head of the canyon.

While this section is still practically in its primitive state, it holds out very alluring promises for the future. Railway surveys have been projected from the south and the east, and once the steel penetrates the district it will open up very rapidly. Mixed farming, dairying, and ranching will thrive as soon as markets are made accessible. Mining will revive when means of transporting heavy machinery is provided. Various rivers offer good inducements for dredging, and quartz ledges have been discovered which could be milled profitably, if machinery could be more easily taken in. The district is known to be highly mineralized, and the field is an excellent one for the prospector. The coal fields above Hudson Hope are believed to be very extensive, and the quality is high grade.

Timber is also plentiful, and much water-power is available. Fish and game are abundant. The scenery is magnificent, and the summer seasons very delightful. The district is rich in fur, and many prospectors scattered throughout its remote corners are combining trapping with their quest for minerals. Their traps yield them a livelihood until they have located paying claims.

With the coming of the steel, and the opening of coal and other mines, this district will develop very rapidly. To those not afraid to face a few years of pioneer work will come the opportunities which await the man on the ground, when the great movement sets in.

The following are tables of distances of present routes:—

TABLE of Distances. Rail and River.

Edmonton to Hudson Hope.

From.	To.	Miles (Approx.)	Means of Travel.
Edmonton	Peace River...	311	Rail.
Peace River.	Hudson Hope...	229	Steamboat.
Total.		540	

TABLE of Distances. (Canoe Route).

Fort George to Hudson Hope.

Route.	Miles (Approx.)
Fort George to Giscome via Fraser river.	42
Giscome portage.	8
Summit lake.	4
Summit lake to Fort McLeod via Crooked river and McLeod lake	65
Fort McLeod to Finlay Junction via Parsnip river	115
Finlay Junction to Rocky Mountain Portage via Peace river	74
Rocky Mountain Portage to Hudson Hope.	14
Total.	322

TABLE of Distances. Rail.

From.	To.	Route.	Miles
Edmonton	Fort George.	Grand Trunk Pacific	486
Prince Rupert.	"	"	469

The Great Agricultural Sections.

The Crown lands and natural resources of the Peace River District included within the boundaries of the province of Alberta and the Peace River Block of British Columbia are the property of the Government of Canada. They are controlled by the various branches of the Department of the Interior at Ottawa. To expedite transaction of official business, this vast district has been divided into land districts, and provided with local offices. Government agents are stationed at these offices to give immediate attention to the disposal of Dominion lands, the control of Crown timber, and the recording of mineral claims.

The Peace River Land District extends from the Fifth principal meridian westerly to the British Columbia boundary. Its southern boundary follows the line between townships 84 and 85 across ranges 1 to 3, between townships 68 and 69 across ranges 4 to 20, and between townships 73 and 74 across ranges 21 to 26 west of the Fifth meridian. West of the Sixth meridian its southern boundary is the Peace River. Its northern boundary extends to the northerly limit of the province of Alberta. This district also includes that part of the Peace River

Block lying north of the river. The agency is located in the town of Peace River with sub-agencies at Fort St. John and North Vermilion.

Grande Prairie Land District includes townships 61 to 73, inclusive, from ranges 21 west of the Fifth meridian to the Sixth meridian. From the Sixth meridian it extends westerly to the British Columbia boundary, and northerly from township 61 to the Peace river. It also includes that part lying south of Peace river of the Peace River Block. The agency is located in the town of Grande Prairie, with sub-agencies at Spirit River and Pouce Coupé.

The tide of settlement to these districts has set in practically within the last ten years. Prior to that only a few scattered pioneers could be found about the various trading posts. The attractions of the district, however, and the unbounded faith of its pioneers gradually drew the attention of the outside world, and home seekers began to make their way in over the long trying trail from Edmonton. Undaunted by such hardships, they blazed the way for others to follow and pressed forward to secure the choicest locations. Surveyors were rushed into the district to lay out the lands, and before the outbreak of the Great War, various localities of particular attraction had become thriving centres of settlement.

Even since the outbreak of war the rush of settlement has continued. Immigration from Europe having been suspended, the district is receiving its new-comers almost entirely from older-settled parts of Canada and various States of the adjoining Republic. Many returned soldiers are now finding their way into the district to locate new homes for themselves. The opening of a railroad and extension of navigation has made the way easier during the last two or three years.

The principal centres of settlement, and the land districts and provinces in which they lie, are shown on the following table:—

PRINCIPAL Centres of Settlement.

Settlement.	Land District.	Province.
1 High Prairie...	Peace River.	Alberta.
2 McLennan...	"	"
3 Peace River...	"	"
4 Dunvegan...	"	"
5 Spirit River...	Grande Prairie	"
6 Grande Prairie...	"	"
7 Pouce Coupé.	"	British Columbia.
8 Fort St. John...	Peace River.	"
9 Hudson Hope.	Peace River and Grande Prairie.	"
10 Fort Vermilion..	Peace River..	Alberta.

Some idea of the extent of settlement and development may be obtained from the following table of miscellaneous figures taken from official returns:—

Returns.	Land Districts.	
	Peace River.	Grande Prairie.
No. homesteads recorded during year 1916.	494	836
No. homesteads recorded during year 1917.	567	900
No. grazing leases issued to Oct. 1, 1917.	29	22
Area in acres.	19,199	23,381
No. timber berths leased to Oct. 1, 1917.	3	7
Area in acres.	13,542	139,865
No. petroleum and natural gas leases issued to Oct. 1, 1917.	298	0
Area in acres.	46,605	0
No. coal claims leased to Oct. 1, 1917.	3	2
Area in acres.	160	100

High Prairie.

A considerable area of excellent farming land, with prairies at frequent intervals, is found about the west end of Lesser Slave lake and on the divide between this lake and the Peace River slope. Various settlements have grown up in this district, of which the earlier were Lesser Slave Lake, Salt Prairie, Heart River, and Big Prairie settlements. These were surveyed in settlement lots prior to the extension of the regular system of township surveys. The old wagon road from Edmonton to Peace River Crossing by way of Athabaska Landing followed the south and west shores of Lesser Slave lake, and at the northwest extremity, at the head of navigation, a trading post was located. About this post has grown up the town of Grouard. From Grouard the trail led northerly to Peace River. Lesser Slave lake has for many years been famous for its yields of whitefish. These fish are caught in the winter, and shipped in a frozen condition. Before the advent of the railway they were freighted by team to Edmonton. Fishing, freighting, and fur trading were occupations that brought large numbers of Indians and hardy white men into this district. Great areas of hay lands along the shores of the lake encouraged the settlers to raise cattle, and this was followed by the cultivation of choice sections of prairie and lightly wooded lands in the vicinity.

A land district embracing over 200 townships about the lake was formed, and an agency established at Grouard for the convenience of the settlers. When the railroad was built it followed westerly about 20 miles beyond the lake before swinging north to Peace River, and then paralleled these older settlements along the wagon road. It crosses a few miles of beautiful prairie located on the height of land between the lake and Peace River, which is now called High Prairie. The old wagon road from Grouard to Sturgeon Lake crossed the same prairie.

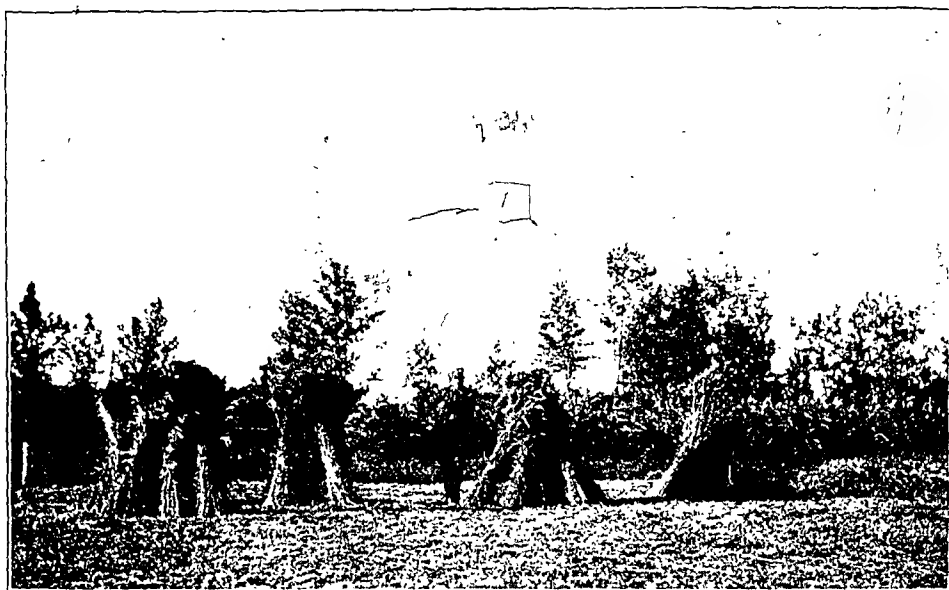


Photo. by F. H. KITTO, D.L.S.
Brome Grass at Fort Vermillion.

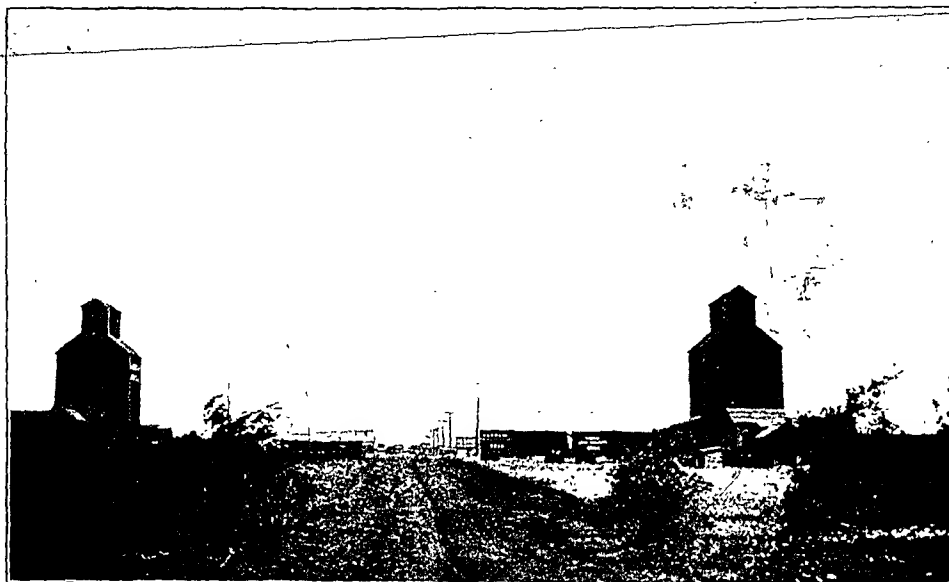


Photo. by F. H. KITTO, D.L.S.
Elevators at Town of Grande Prairie.

This prairie has been located and settled very rapidly since the building of the railroad. About the depot established here has grown up the town of High Prairie, where the Dominion Land Agency originally located at Grouard was later established. This prairie gave its name to the land district as well as to the town, the district formerly called Grouard being known later as High Prairie Land District. It has recently been absorbed in the Peace River Land District by the enlargement of boundaries of the latter.

The soil throughout this section is good, being mostly black loam with clay or sandy clay subsoil. Many patches of prairie occur, but these are not extensive, except the hay meadows and marshes found along Lesser Slave lake. The greater part of the section is wooded. The woods range from light scattered poplar, with clumps of willow, to thick spruce, jackpine, birch and poplar, up to 8 or 10 inches in diameter. The surface generally is level or rolling, but numerous small rivers, with deep ravines, cut up many quarter sections and render them unfit for cultivation. There is usually good pasture, however, in these ravines.

All ordinary grains, grasses, and vegetables are grown in this section. It is well adapted for mixed farming and contains much good land open for settlement. This section is the first reached from the south, High Prairie being but 234 miles by rail from Edmonton.

McLennan.

McLennan is the second divisional point on the Edmonton, Dunvegan and British Columbia Railway, being 262.2 miles northwest of Edmonton. It is the southern terminus of the Central Canada Railway, which runs 48.5 miles northerly to the town of Peace River. Both of these railroads are being operated under the same system, thus affording a through service to the north and west alike. From McLennan the main line of the Edmonton, Dunvegan and British Columbia railway runs westerly to Spirit River, crossing the Smoky river a few miles below the mouth of Little Smoky river. The old wagon road from Grouard to Peace River, over which the early settlers toiled from Edmonton, passes within 15 miles of McLennan to the east, so that this section was overlooked entirely during the first rush.

Settlers found their way into the Spirit River and Grande Prairie sections by way of Peace River and Dunvegan, a long, roundabout route, though the only good trail. Later these same settlers, finding it necessary to do considerable freighting to and from Lesser Slave lake, and even Edmonton, located a shorter route from Spirit River to Grouard. Their wagon road is now almost paralleled by the railroad. The Smoky crossings are within 3 miles of each other, and the wagon road crosses the same township in which McLennan is located.

With the opening of the wagon road from Grouard, attention began to be directed to areas of splendid land lying between Winagami and Kimiwan lakes, and the Smoky river, and settlement here has been rapid since the laying of steel.

McLennan is located on the south shore of Kimiwan lake. About this lake are large hay meadows. Northerly along the Central Canada railway is found rich, level land with open patches, but generally wooded. A number of locations have been made at Camelia and at Reno, where the steel and the old Peace River wagon road converge to within a mile or two of each other, with the North Heart river between. Between McLennan and Smoky river there is excellent land, gently undulating, with black loam on clay subsoil, and covered with light wood and numerous patches of prairie. Township 78, range 21, west of the Fifth meridian, is practically all located, and settlement is spreading rapidly in all directions. The principal points are Donnelly, Falber, and Fowler. Heavier spruce woods are found along the Smoky.

Peace River.

The town of Peace River, the hub of the great district whose name it bears, has grown in a few short years from a rude collection of divers small buildings, clustered about the old trading posts, to a flourishing agricultural and business centre. The original trading post was located a few miles upstream from the present town, and about it the Shaftesbury Settlement blazed the way in grain growing in the Peace Valley. The newer posts and the town are beautifully located on sunny flats, nestling between high rolling banks immediately below the junction of the Smoky and Peace rivers, and at the mouth of the Heart.

Here the wagon road from Edmonton, winding its way down the narrow gorge-like valley of the Heart, reached the Peace, and the weary traveller caught his first glimpse of that great river whose name had lured him on over the long trail.

A favourable spot for crossing the river was found at this location, and for many years a cable ferry has been in operation. The old Hudson's Bay steamboat *Peace River* here exchanged great bales of raw furs for supplies of all kinds which the freighters brought from Edmonton. It plied up and down the river, supplying the lonely outlying posts with provisions for a new year and bringing out their fur catch of the past year. The trail, interrupted by the river, resumed its way westward, and after traversing the settlement of Shaftesbury, wound up the hill to the high plateau above, which it followed as far as Dunvegan.

"Peace River Landing" and "Peace River Crossing" were names variously applied in earlier days, but "Peace River" is now the official name of the town. The trail from Edmonton has served its purpose. The railroad now reaches the town, and the hardy freighter has gone to new fields. The trail to Dunvegan is still a much-travelled highway, as it serves a very fertile and thickly settled section of land west of the town. It is in good condition, and automobiles are regularly seen upon it. Grading has been commenced for the extension of the railroad to follow this trail, as it has done from Edmonton, and the erection of a mighty bridge to span the river is well under way at Peace River town.

The Dominion Lands Agency for Peace River Land District is located here, also the posts of the Royal Northwest Mounted and the Provincial Police.

Railway, telegraph, telephone, and semi-weekly mail service keep the town in touch with the outside world. Two weekly newspapers are published. Schools, churches, a hospital, and an immigration hall are among the public buildings.

Various places of business supply the needs of the town and adjoining country. A Board of Trade and an Agricultural Society take active interest in the building up of the district. Coal has been found within 6 miles of the town, and gas and oil within 14. The extent of these discoveries has not yet been determined, but development work is being continued and, profiting by the experience of other localities, no attempt is being made to "wildcat" them.

Excellent farming land extends from the west side of the river right through to Dunvegan, the Sixth meridian being located midway. The chief centres of settlement in this part are: West Peace River, Shaftesbury, Bear Lake, Paul's Corners, and Griffin Creek. North of West Peace river and Bear lake there is good land open for settlement as far as Whitemud river. A wagon road extends farther north to Battle or Notikewin river. There is excellent prairie land here, surrounded by fairly heavy timber. Practically no land has been taken up yet in this part. During the season of navigation the Battle prairies can be easily reached by steamer. A wagon road leads from the steamboat landing near the mouth of the river into the heart of the prairie, a distance of 25 or 30 miles. Supplies are available at the trading post at the landing.

The land surrounding the town of Peace River, on the same side of the river, is rough and broken by the junction of the Smoky and the Heart rivers with the Peace. There is, however, much good grazing land in numerous valleys and ravines. On the plateau above the valleys the soil is good but mostly wooded, and has some muskeg and marsh. While the choicest prairie locations have been pretty well taken up in this section, there are thousands of acres still available of land just as good, though requiring more work to bring under cultivation.

Since the completion of the railroad from Edmonton to Peace River, the northern trade has increased very rapidly. Tourists are now able to go by rail and steamboat into the great Mackenzie and Arctic regions. Trappers, traders, and prospectors are continually coming and going, and during the season of navigation Peace River has become a busy shipping point. Railroad surveys have been projected northerly to Fort Vermilion and Slave lake, and when the resources and beauties of the north become better known it is expected that this town will play an important part in its development.

Dunvegan.

Over one hundred years ago barley, potatoes, and several varieties of garden vegetables were grown by the employees of the Northwest Company on the river flats adjoining their post at Dunvegan. The results are said to have been very satisfactory. Grains, grasses, and vegetables are now grown extensively in all sections around this early starting point, and the district is fast developing into one of the most promising portions of the country.

Dunvegan itself is still merely a Hudson's Bay post. It is located on the north shore of Peace river, 61 miles above the town of that name, and 18 miles by trail from Spirit River. The valley here is narrow and about 800 feet deep. A ferry has been installed, and is operated during the open season at the point where the wagon road crosses. The southern banks of the valley are thickly wooded. These woods, however, extend only a short distance beyond the top of the bank, when they give way to the Spirit River prairie. The northern banks are rugged and broken, and almost bare of trees. The plateau above comprises a very extensive area of excellent land.

Unfortunately Dunvegan has been "boomed" and "townsited" in advance of any reasonable necessity. The farm lands, which represent the real value of the district, lie on the high plateaus to the north and south of the river valley. These lands are exceedingly fertile, level or gently rolling, prairie or nearly open, rich in soil and well watered. They represent some of the finest wheat-growing sections of the world. A half-section of this land, faithfully cultivated, will prove a real source of revenue and wealth to the investor, as distinguished from the wildly speculative "townlots," whose corner posts stand out in gaunt array on the wind-swept hillsides overlooking the little cluster of whitewashed log buildings in the valley below, which constitute the present "town."

North of Dunvegan there is excellent land as far as the Clear Hills, while easterly along the old trail from Peace River, some of the best improved farms of the province are to be seen. The land has all been thrown open for settlement; very little is held in any form of reserve; consequently settlement has been uniform, and no "gaps" have been left. Good roads, telegraphs, telephones, schools, and churches are among the advantages of this district. The buildings and fences are in a remarkable state of advancement for a new district. In fact, this can no longer be called a "new district." It has passed its pioneer stage and settled down to a prosperous well established community.

Between Dunvegan and the Sixth meridian the principal centres are Waterhole, Vanrena, Friedenstall, and Bluesky. Finer farms cannot be found in any part of the West than in the vicinity of these villages. East of the Sixth meridian this fine settlement extends to the town of Peace River.

Spirit River.

The Spirit River prairie is not extensive, but comprises a few townships of excellent farm lands on a high plateau on the south bank of the Peace river, opposite Dunvegan. It was formerly reached from Edmonton by way of the Peace River Crossing and Dunvegan wagon road, being on the route that extended from Dunvegan to Lake Saskatoon. Trading posts have carried on business here for many years, the fur trade with the Indians having been extensive. About these posts a settlement grew up, which was surveyed as such in 1907. Township surveys were extended in 1909, and settlement rapidly followed.



Photo. by F. H. KITTO, D. L. S.
Park Land- of Peace River District.



Photo. by F. H. KITTO, D. L. S.
Flower Garden on Experimental Farm, Fort Vermilion.

The soil is a rich, deep, black loam, and vegetation is very luxuriant. Wheat, barley, oats, and all common vegetables yield abundantly. The surface of the country is level or gently rolling, with an altitude of 2,400 feet above sea-level. It comes within the influence of the warm "Chinook" winds, and is well adapted to mixed farming and stock raising.

The town of Spirit River is the present terminus of the main line of the Edmonton, Dunvegan and British Columbia railway. Location and grading have been produced about 60 miles farther west, and a branch line runs south to Grande Prairie. Elevators and other shipping facilities provide ready outlet for farm produce. By the old-wagon route it is 18 miles to Dunvegan and about 83 to Peace River town. This road is in good repair, and much used by automobiles. Auto liveryes ply regularly between Peace River, Dunvegan, and Spirit River, between Spirit River and Pouce Coupé, and between Spirit River and Grande Prairie points. The section is well served by good roads and railroads, and presents a very prosperous appearance. It is surrounded by lands, partly broken and fairly heavily wooded, but with fertile soil everywhere. Much good land is still available, but will require more or less clearing.

The town is well provided with schools and churches, telegraph and mail service, sawmills and business establishments, and has a Board of Trade actively engaged in furthering the interests of the district and assisting new comers to locate.

Grande Prairie.

This famous district comprises a vast prairie lying on a high plateau south of Peace river and between the Sixth meridian and British Columbia. It is bounded on the south by the Wapiti river and on the east by the Smoky river. Along its north runs a rough and wooded ridge dividing it from the Spirit river and Pouce Coupé prairies. Westerly it extends to the foothills of the Rockies. Its area exceeds two thousand square miles of as fine wheat growing land as can be found anywhere. The surface is level or gently rolling and the soil is a deep, rich, black loam on a clay subsoil. The valleys of the rivers and the outer edges of the district are wooded, but the main area is either open prairie or very lightly covered with bluffs of poplar and brush.

Grande Prairie has been settled within the last five to seven years. The main prairie and many choice adjoining spots have already been taken up. Settlement, however, continues to pour into the fringes of the district, where the presence of good soil outweighs the disadvantages of bush and small timber which must be cleared off before the land can be broken. Settlers are now taking up land along the Beaverlodge and Red Willow rivers, going as far as 55 miles west of Grande Prairie station. Excellent land is found in these sections, and several large farms are already in full operation, one farmer having 500 acres of crop this year. There is still good land open for homesteading here, but it is fast being taken up.

The Grande Prairie district is reached by a branch line of the Edmonton, Dunvegan and British Columbia railway from Spirit River running southerly to

within a few miles of Wapiti river and near Flying Shot Lake settlement. About its terminus has grown up the town of Grande Prairie, which has become the centre of business for the district whose name it bears. It is a thriving western town, and contains three elevators, a flour mill, several good stores and hotels, bank, large two-story graded school, hospital, churches, immigration hall, creamery, and other enterprises.

The Dominion Lands and Crown Timber office for Grande Prairie Land District is located here. Telegraph and telephone connections with Edmonton and local points are available. A weekly newspaper is published. A Board of Trade and an Agricultural Society take a live interest in furthering the welfare of town and country.

Lake Saskatoon, 14 miles west of Grande Prairie, is a small village growing up around the old trading post located on the bank of Saskatoon lake. Its location is both beautiful and historic. In the heart of the prairie it commands a sweeping view, for miles in all directions, of waving fields of grain where but a few years ago all was wilderness. Before the building of the railroad it was the distributing point for the district, being the last post on the old Edmonton-Peace river-Dunvegan wagon road. Railroad surveys have been projected from the south to this point, but no construction has yet taken place. In addition to the Hudson's Bay, Revillon's and the Peace River Trading Company's posts, there are various other places of business, also a bank, a weekly newspaper, post office, telegraph office, schools and churches.

Bear Lake lies about 9 miles northwest of the town of Grande Prairie, and is surrounded by land in a very advanced state of improvement and high cultivation. Here may be seen vegetable and flower gardens which cannot be surpassed for variety and yield anywhere in the West. Even ornamental and fruit trees and shrubs, grown from seed, are progressing quite satisfactorily.

Smoky and Wapiti rivers have deep valleys heavily wooded, and for some miles on either side of these valleys the land is rough and broken, though much of it is good for grazing. At the junction of these rivers, 20 miles east of Grande Prairie station, is the village of Bezanson, about which the land is very good. North and east from Bezanson there is good land, mostly lightly wooded, extending to Sturgeon Lake and High Prairie.

Clairmont and Sexsmith, on the railway line, are springing up into flourishing little towns in the midst of a well-improved section. Other centres are Kleskan Hill and Glen Leslie, lying between Grande Prairie station and Bezanson, Spitfire Lake, Niobe and Hermit Lake, centrally located, and Valhalla, Hythe, Beaverlodge, and Halcourt, situated towards the western limits of the district.

At Beaverlodge, the Experimental Farms Branch of the Dominion Department of Agriculture has been carrying on experimental work for several years, under the immediate supervision, and on the farm of Mr. W. D. Albright, with good results. Arrangements have been made to carry on this work on a much larger scale in the future, the experiments to include work with forage plants, cereals, and horticulture.

Pouce Coupé.

The Pouce Coupé prairie lies in the south-eastern part of the Peace River Block in the province of British Columbia. It comprises several townships of gently rolling prairie and a number with scattered bluffs and light woods. The extent of this choice area is about 25 miles wide by 40 miles long. It is separated from Spirit River and Grande Prairie by high wooded plateaus on its east and south. To the north and west it extends to the rough wooded banks of the Peace and South Pine rivers. It is now reached by a good road from Spirit River.

The location of the main line of the Edmonton, Dunvegan and British Columbia railway passes through this district from east to west. Grading has been completed from the end of steel at Spirit River to Pouce Coupé village, a distance of about 55 miles, and steel will shortly be laid. With railway facilities, this district promises to be one of the finest yet opened. Upon development of the coal and other resources of the upper sections of the Peace, and the completion of railway connection to the coast, undertakings which are but a matter of time, the value of this section will be further enhanced. The principal centres at present are Pouce Coupé and Rolla.

The Pouce Coupé country is an ideal place for ranching. It is an elevated plateau of about 2,400 feet above sea-level, lying immediately to the east of the Rocky mountains and foothills. The soil is very rich, and wild hay and peavine grow abundantly. The influence of the warm "Chinook" winds is very marked. They sweep through the mountain passes and flood the entire district, from time to time, during the winter, removing the snow and giving pleasant respites from the cold. Even aside from these warm waves, the winters are short. Stock pasture out the year around, and the summers are particularly clear and fine. ~~Wheat and all ordinary grains, grasses, and vegetables yield abundantly. The seasons are particularly free from summer frosts and hail, and the climate generally is very pleasant.~~

Fort St. John.

Fort St. John is on the north bank of Peace river, on a small flat at the foot of steep rugged banks some 800 feet high. It is 178 miles by river above Dunvegan, and lies in the Peace River Block in the province of British Columbia. A wagon road from Dunvegan to Hudson Hope passes through it, and there is also a pack trail from Pouce Coupé. It was established decades ago as a Hudson's Bay post. Later another trading post was opened which is now operated by Revillon Frères. The provincial police of British Columbia have established a station here, and the Dominion Government a telegraph office. There are usually a number of Indians encamped about the post, as this is a rich fur district, and extensive trading is done.

The Fort St. John district that is attracting farmers and ranchers lies north of the river on a high plateau. The land is level, and mostly open or very lightly

wooded. The soil is good, and vegetation very luxuriant. Wild grasses and peavine grow in great profusion. The North Pine river lies to the north and east, and enters the Peace about 20 miles below the Fort. Its valleys are deep, and its many tributaries, with their deep ravines, tend to break up much of the country and make it too rough for grain growing. These valleys and hillsides afford good grazing. Taken on the whole, this district is well adapted to mixed farming and ranching. The snowfall is light, and the Chinook winds keep the hillsides bare nearly all winter, making it possible for stock to graze out.

The district is still remote from markets and civilization, but several families have recently located there, being attracted by the bracing climate and the fertility of the soil. With the extension of railways and development of the many resources of the upper Peace river regions, this section may be expected to be rapidly settled.

Hudson Hope.

Hudson Hope is located on Peace river near the westerly limit of the Peace River Block. It is the gateway from the great plains to the mountain regions, being at the foot of Rocky Mountain canyon, where the river bursts through from the foothills to pursue its placid course beyond. In early days a trading post called "Rocky Mountain House" was located at the upper end of the canyon. This was replaced by a post at the foot of the canyon, about which two other trading posts and a few scattered buildings have sprung up. These constitute the present Hudson Hope. Steamboats ply up and down during the open season from the town of Peace River, some 229 miles, and there is considerable travel by canoe from Fort George. This route, by canoe and portage, is about 322 miles. A wagon road, some 14 miles in length, leads past the canyon to the upper waters of the Peace, which are navigable for steamers. Various trails lead out to the haunts of the trapper and prospector, for this district is rich in fur and has wonderful mineral possibilities. Great deposits of coal are known to exist above the canyon, and indications of various precious metals are in evidence.

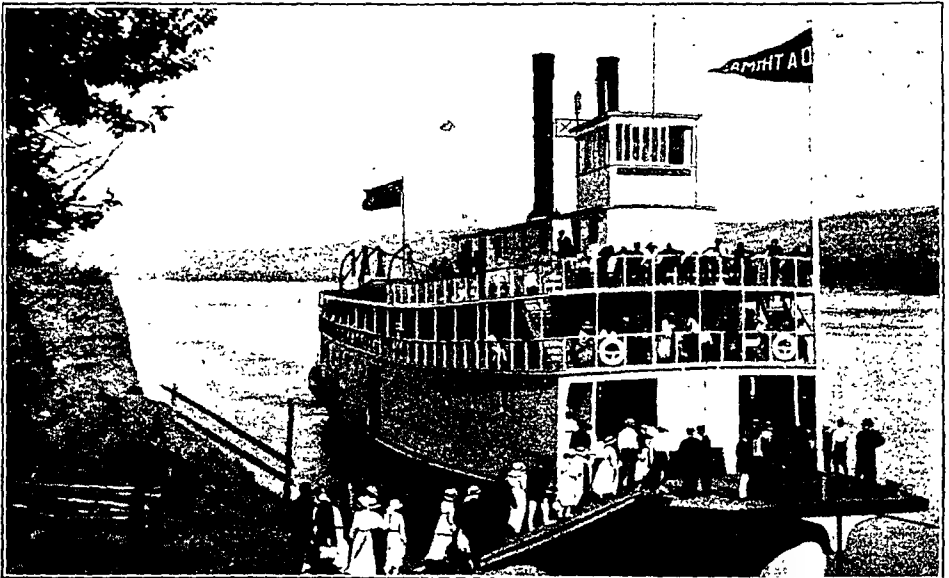
On the plateaus on both sides of the river there is considerable good agricultural land. The soil is sandy loam, and the surface is gently rolling and lightly wooded. A trail leads south 18 miles to Moberly lake, where there is some excellent soil and luxuriant pasture. This lake is filled with whitefish. There is an Indian reserve at each end of it, but very few white settlers.

A number of homesteads have been located about the post, and a few along the river flats between the post and Fort St. John. On these flats the land is excellent and very heavy yields of grain and vegetables are harvested every year.

Hudson Hope is now provided with telegraphic service, the Edmonton-Peace River government telegraph line having recently been extended through to it. It holds a very strategic position, and may become an important point when this part of the territory is developed, but at present is well in advance of settlement and does not warrant any boom.



Photo. by F. H. KITTO D L S.
Vegetables grown in Peace River Valley.



S.S. D. A. Thomas at Peace River.

Fort Vermilion.

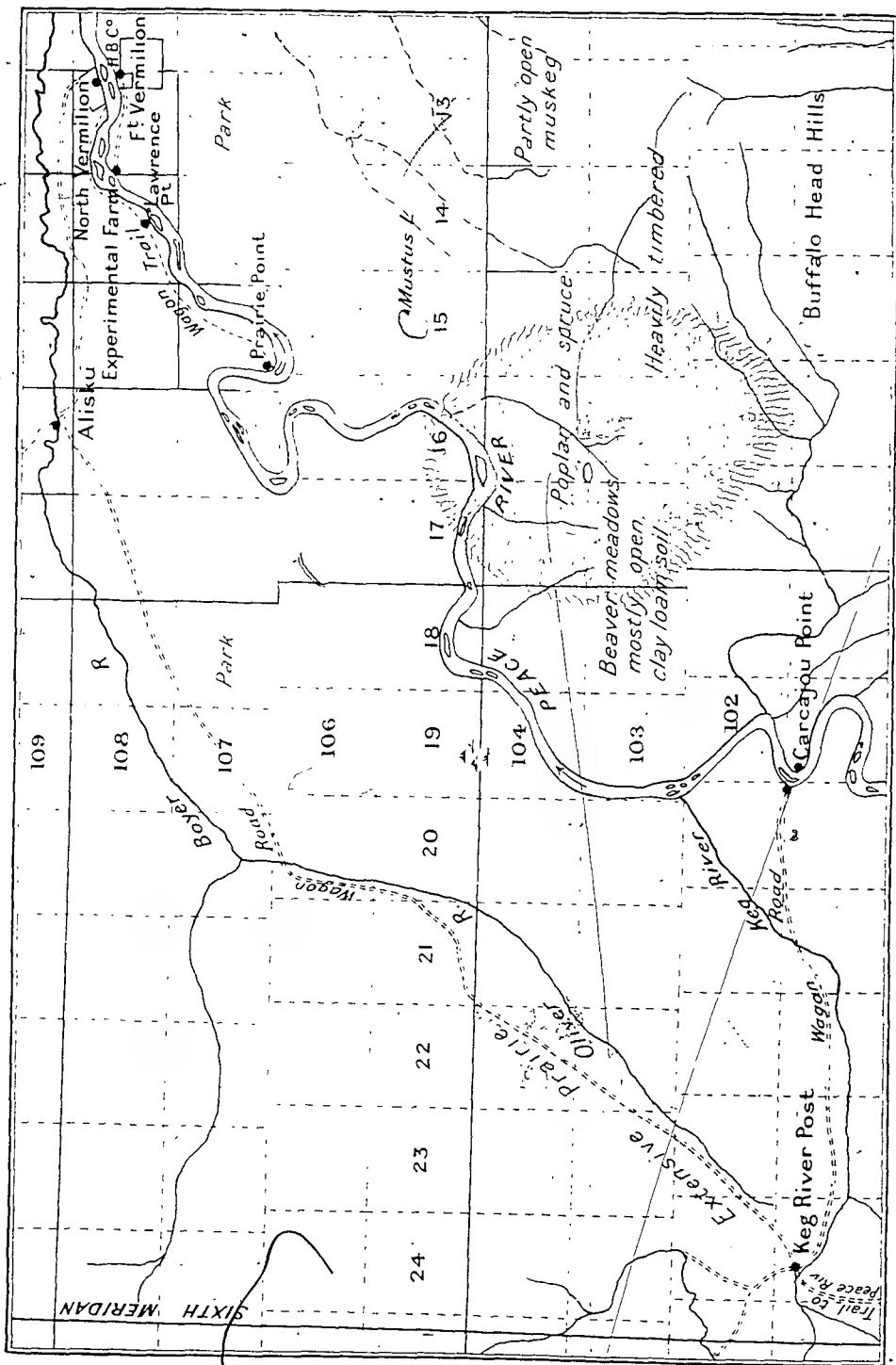
The last great area of virgin plains still remaining practically untouched by the tide of settlement which is sweeping over other portions of the Peace river district lies away to the north around the old trading post of Fort Vermilion. Last to receive its share of this human tide, and yet first to let the world know of its riches and possibilities, this primitive post still stands guard in the heart of a vast solitude which will soon echo with the busy life of thousands of homes. Beautifully situated on the low, broad valley of the Peace, where the waters are wide and placid and the high steep bluffs have given way to gently sloping banks scarcely higher than the valley itself, the quaint cluster of buildings stands out in bold relief and presents an inspiring front.

The simple daily routine of duties, the quiet methodical trading-post customs, the little groups of Indians loitering about the post, or the flutter of excitement when the steamboat whistle is heard, give the traveller a pleasant glimpse of that life so closely associated with the early settlement of the west, when the trader was monarch of all he surveyed. Located about 250 miles north of the town of Peace River, cut off from the outside world except for steamboat service during a few summer months, and with its interest focused on the fur trade of its own great district, the little post has lived its own life and retained its simple customs far from the stress and worry of greater centres. The dawn of a new era is just approaching, but the transition will be rapid.

About the post are clustered the Hudson's Bay buildings, including a modern 50-barrel roller flour mill, steam driven and electric lighted, and a saw and shingle-mill; the Roman Catholic mission; to the east the English Church mission; to the western end of the flat the new post of the Peace River Trading Company; and on the opposite side of the river at North Vermilion, Revillon's post. A few scattered farms are being worked, the missions and Indians cultivating some choice land. Aside from these only a few settlers, about half a dozen, are on the land. Two striking farms, a few miles up river, the Lawrence farm at Lawrence Point and the Jones farm at Stoney Point, have for twenty years been producing all varieties of grains and vegetables. For over a quarter of a century, wheat has been raised about the post, and the possibilities of the district have long since been established.

For 150 miles along the river, from Carcajou to Vermilion chutes, and extending 25 or 30 miles on either side, lies one of the most fertile plains of the American continent. The surface is level or gently rolling, and the soil is a rich deep loam on a sandy clay subsoil. Many hay meadows are found, and a small percentage of the surface is light muskeg. A few sandy ridges occur, usually covered with jack pine. Much of this area is prairie, but the predominating feature is its park-like nature. Bluffs and small clumps of poplar and birch, with patches of open prairie intervening, or extensive prairies with occasional small poplars scattered singly here and there, is the prevailing nature of the surface.

Spruce and heavier poplar and cottonwood are found along the waterways. Willow, alder, and other bushes are found on low land but are not as plentiful as



FORT VERMILION & KEG RIVER DISTRICT

in the Edmonton district. Building logs, fencing material, and fuel can be found within easy distance of any location, while the shelter for stock obtained from the light woods is an advantage the bald prairie does not possess. Most of the land requires but little clearing, and the soil is remarkably easy to break. The choicest park lands comprise over a million acres, while another two million acres of excellent land will require but little clearing to fit it for cultivation. There still remain several million acres of good land, fairly easy to clear or drain, and which, when brought under cultivation, will give excellent returns.

The luxuriant growth of all vegetation, and the rapidity with which it matures, seem remarkable considering the latitude of the district, Fort Vermilion being in latitude $58^{\circ} 25'$ north. The altitude, however, is low, being about one thousand feet above sea-level, which offsets, to a certain extent, the northern latitude. The length of day during the summer season also hastens vegetation, the summers, though short, having almost continual daylight. Summer frosts and hail are very rare, and crop failures from any cause are unknown.

The Dominion Government has established an experimental station under the immediate supervision and on the farm of Mr. Robt. Jones at Stoney Point, and during the past eight years extensive tests have been made to determine the degree of success which could be obtained with various cereals, forage plants, fruits, and vegetables under normal conditions. The results have been most gratifying. On the Sheridan Lawrence farm a stone flour-mill has been in operation for over twenty years, and a roller mill has been lately installed. Flour made from wheat grown in this district has been supplied to the northern trade continuously, and great quantities were disposed of to the Klondike miners during the rush of '98. A shipment of 9,000 bushels of wheat was made from the Lawrence farm to Fort William in the spring of 1917, and created wide interest. The long haul and high freight rates were overcome by the high price prevailing at that time. This is not a normal condition, however, and until railway facilities are provided for shipping the grain, this district must find its markets nearer home. The northern trade, rapidly expanding, will provide markets for many years to come.

While the district is exceptionally well adapted to wheat growing, it is also well suited to stock raising and mixed farming. Keeping in view the market possibilities, it should prove an excellent field for mixed farming, dairying, and small cattle ranches. The Keg river valley contains thousands of acres of the finest grazing lands to be found anywhere. The Hay river valleys, Hay Lake prairies, and Buffalo Head hills also contain much excellent grazing land.

The Hudson's Bay Company have outposts at Red River, a few miles below Vermilion chutes, at Hay river and Keg river, and also a warehouse at Carcajou. Revillon Frères have outposts at Hay river and Keg river, with a warehouse at Carcajou. The Peace River Trading Company also has an outpost at Hay river, which is reached by a wagon road running about 100 miles north-westerly from Fort Vermilion. The fur trade at this outpost is very extensive, it being the chief trading centre of the Slavey tribe of Indians, whose hunting grounds extend

from Hay lakes to Great Slave lake. Between this post and Great Slave lake are found the wonderful Alexander Falls, whose height and beauty rival the mighty Niagara.

Westerly from the post, a pack trail leads about 75 miles up stream to the Hay lakes. About these lakes lies an extensive plain, level and fertile, and producing yearly hundreds of thousands of tons of hay. Much of this area, however, is low and wet and subject to annual flooding, which renders it unfit for grazing the year round. Along the wagon road from Fort Vermilion to Hay River post for the first 50 miles, is found the finest wheat land one could wish to see, Buffalo Prairie being a particularly beautiful stretch of country. The divide between the Peace and Hay watersheds is high and stony, and stony land is also found for the remainder of the distance to Hay River post, but it is covered with a luxuriant growth of wild hay and peavine. It is well watered, and would make an excellent ranching district. The Watt mountains lie immediately to the west, and are well wooded.

A good wagon road leads from Fort Vermilion to Keg River post, and from the post to the bank of the Peace at Carcajou. Along this road the land is exceptionally good. A little heavy bush is encountered, and many large hay meadows are seen where the Beaver Indians make hay for their horses. For 30 miles before reaching the post the road runs through one of the finest ranching valleys to be found anywhere, covered with peavine waist high, watered by a good strong stream, and sheltered by woods on either side. Thousands of cattle could graze out here the year round.

From Keg River post a pack trail runs to Battle or Notikewin river from whence it is widened out again to make a wagon road to the town of Peace River. Steps are being taken to cut out this last section of pack trail so as to give a wagon road from Peace River to Fort Vermilion.

South and east of Fort Vermilion, numerous trails lead across the great stretches of beautiful rolling land extending to the Buffalo Head hills and the Wabiskaw river, where rich grazing lands and valuable timber areas are found.

This great district has wonderful possibilities and a delightful climate. At present it is difficult of access, except in summer time, and cut off from other sections of the Peace River District and the outside world. It is reasonable to expect that within a short time a good wagon road from Peace River will be provided. With a mail and stage service operating on this road the year round, this objection will be removed to a large extent. Railway explorers have been looking over various routes into the district, and even beyond, as far as Great Slave lake. No doubt in time steel will be laid through the district, but this cannot be depended upon as an immediate move.

The following tables prepared from data supplied by the Director of Experimental Farms speak more forcibly of the possibilities of the Fort Vermilion district than mere words:—

EXPERIMENTAL Station, Fort Vermilion, 1917. 1. Result of Grain Tests.*

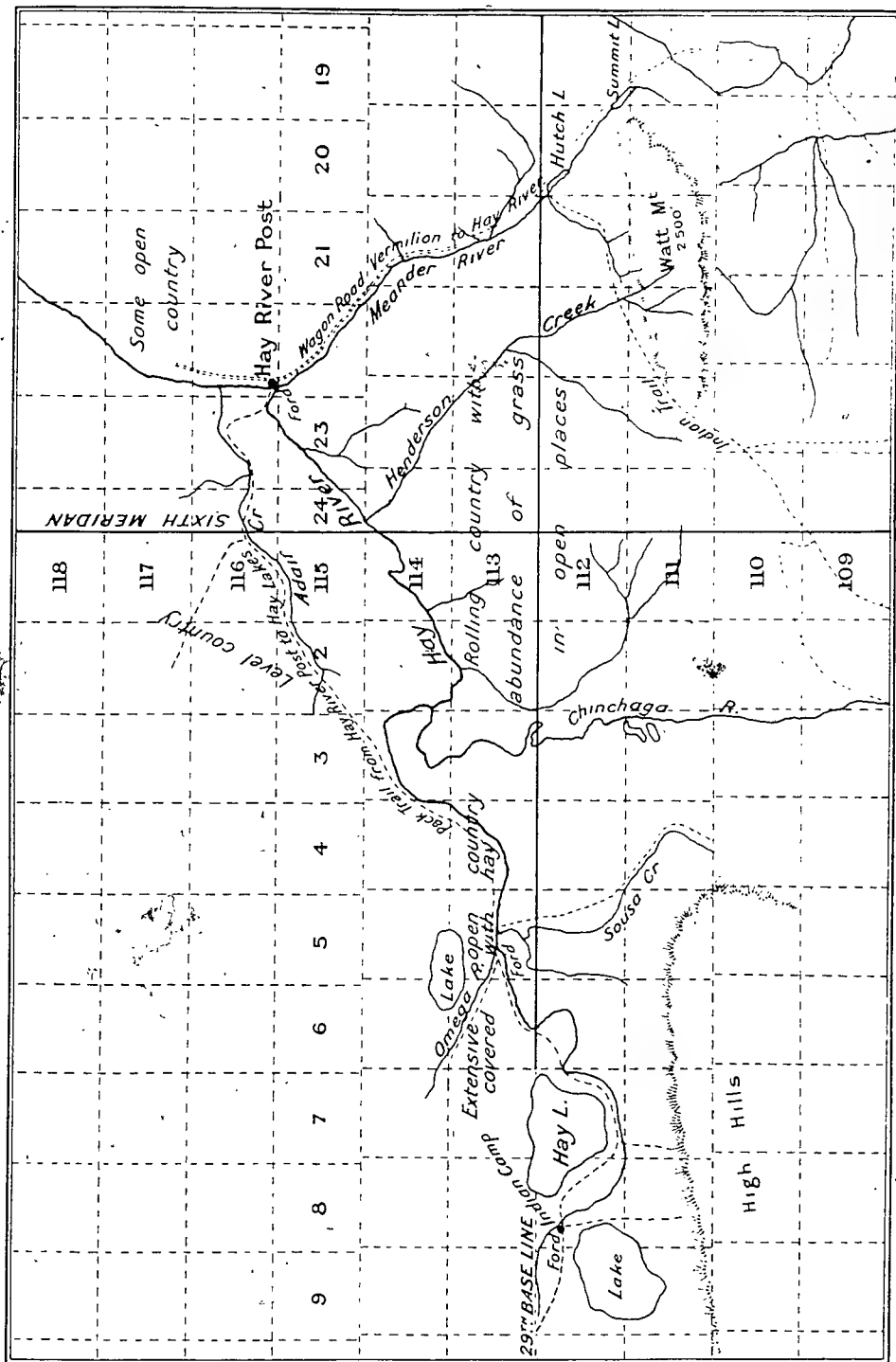
Variety.	Date sown.	Date cut.	No. days. maturing.	Yield in bushels per acre.
<i>Wheat.</i>				
Red Fife.....	May 8	August 15	99	64
Marquis.....	" 8	" 15	99	69
Huron.....	" 8	" 15	99	62
Prelude.....	" 8	" 11	95	48
Stanley.....	" 8	" 15	99	66
Bishop.....	" 8	" 15	99	60
<i>Barley.</i>				
Success.....	May 14	August 14	92	61
Champion.....	" 14	" 14	92	65
Manchurian.....	" 14	" 14	92	77½
Canadian Thought.....	" 14	" 14	92	96
Hulless White.....	" 14	" 14	92	62½
<i>Oats.</i>				
Banner.....	May 12	August 12	92	153
Tarter King.....	" 12	" 12	92	125
Improved Ligowo.....	" 12	" 12	92	128½
80-Day.....	" 12	" 8	88	81
Debner.....	" 12	" 12	92	100
Black Mesdag.....	" 12	" 12	92	88
Garson's Regenerated Abundance.....	" 12	" 12	92	155
<i>Peas.</i>				
Arthur.....	May 9	August 18	102	47½
Prussian Blue	" 9	" 18	102	45½
Also spring rye. 60 bushels and flax 21 bushels per acre.				

*Director of Experimental Farms, Dept. Agriculture, Ottawa.

LIST of produce successfully grown in open field under normal conditions without use of greenhouse or irrigation, 1917.*

Product.	Remarks.
Asparagus.....	In use end of May.
Apples.....	Crab trees bearing; also 1 Robin, several varieties young trees.
Alfalfa.....	Over 4 tons per acre.
Beans.....	Several varieties all matured.
Beets.....	Excellent crop.
Brussels Sprouts.....	"
Brome Grass.....	A heavy crop.
Celery.....	Weight 10 lbs. per dozen.
Canary Grass.....	4 tons per acre.
Carrots.....	Several varieties. Heavy yield.
Cucumber.....	Heavy yield, green. Did not ripen.
Corn.....	Sweet table corn fully matured. Field and ensilage yielded up to 70 tons per acre.
Cabbage.....	Very fine samples.
Cauliflower.....	"
Currants.....	Black, red and white, 23 varieties in all. Excellent yields.
Cherries.....	Young trees.
Flowers.....	76 varieties blooming. Very beautiful and luxuriant.
Gooseberries.....	A good yield.
Lettuce.....	A heavy crop.
Onions.....	"
Orchard Grass.....	"
Parsnip.....	"
Parsley.....	"
Pumpkins.....	Fully matured.
Potatoes.....	Several varieties. Yield up to 450 bus. per acre.
Peas.....	Table and field peas. Excellent crops.
Radishes.....	Very early.
Rhubarb.....	Doing well.
Raspberries.....	Two varieties yielded well.
Rye Grass.....	A heavy crop.
Squash.....	Fully matured.
Shrubs.....	A beautiful array of ornamental and flowering shrubs.
Sainfoin.....	A heavy crop.
Strawberries.....	Excellent yield.
Spinach.....	"
Sugar beets.....	A heavy crop.
Tomatoes.....	Could be ripened if plants were started in greenhouse.
Turnips.....	Heavy yield.
Timothy.....	A heavy crop.
Vegetable Marrow.....	Fully matured.

*Supt. Experimental Station, Fort Vermilion.



Publications and Information Available.

The Government of Canada and the provincial Governments of Alberta and British Columbia offer all reasonable inducements and assistance to encourage the development of the Great Peace River District. Progressive steps have been taken to open it up by establishing lines of communication and transportation on land and river, and by building roads and bridges. Telegraph, telephone, and mail service keep it in touch with the older parts of the country. Law and order are rigidly enforced and maintained, and life and property efficiently protected. Educational and social advantages are provided. Advice and assistance is given the homesteader in the choice of his location, the methods of farming his land and the securing of his live stock. Crown lands are given free to homesteaders on complying with easy conditions; minerals may be staked and recorded on payment of small fees; and, generally speaking, he who assists in the development of the country may reap his own reward. The resources are there, and the district offers them to bona fide settlers who will make their homes there and become citizens of the Great Empire of which this corner is but a small part. To those who are willing to faithfully undertake a few years of pioneering, the opportunities for success are indeed promising.

Various useful maps and publications are available for free distribution, in addition to copies of official regulations relating to the disposal of resources.

When writing for maps the applicant should endeavour to state specifically the scope which it is desired such maps should cover. Requests for information concerning any particular locality should be made to the local Agent of Dominion Lands. For information of a general character, maps, and particulars of the regulations governing the disposal of Dominion lands, timber berths, grazing leases, mineral rights, water-powers and irrigation schemes, applicants should address the Natural Resources Intelligence Branch, Department of the Interior, Ottawa. This branch will, where necessary, refer without delay queries requiring the special attention of any other office to the proper authorities. Reports of the Experimental Stations at Fort Vermilion and Beaverlodge, and general information pertaining to agriculture, are available from the Director, Experimental Farms, Department of Agriculture, Ottawa. The Deputy Minister, Mines Department, Ottawa, should be addressed for reports relating to mineralogy and geology.

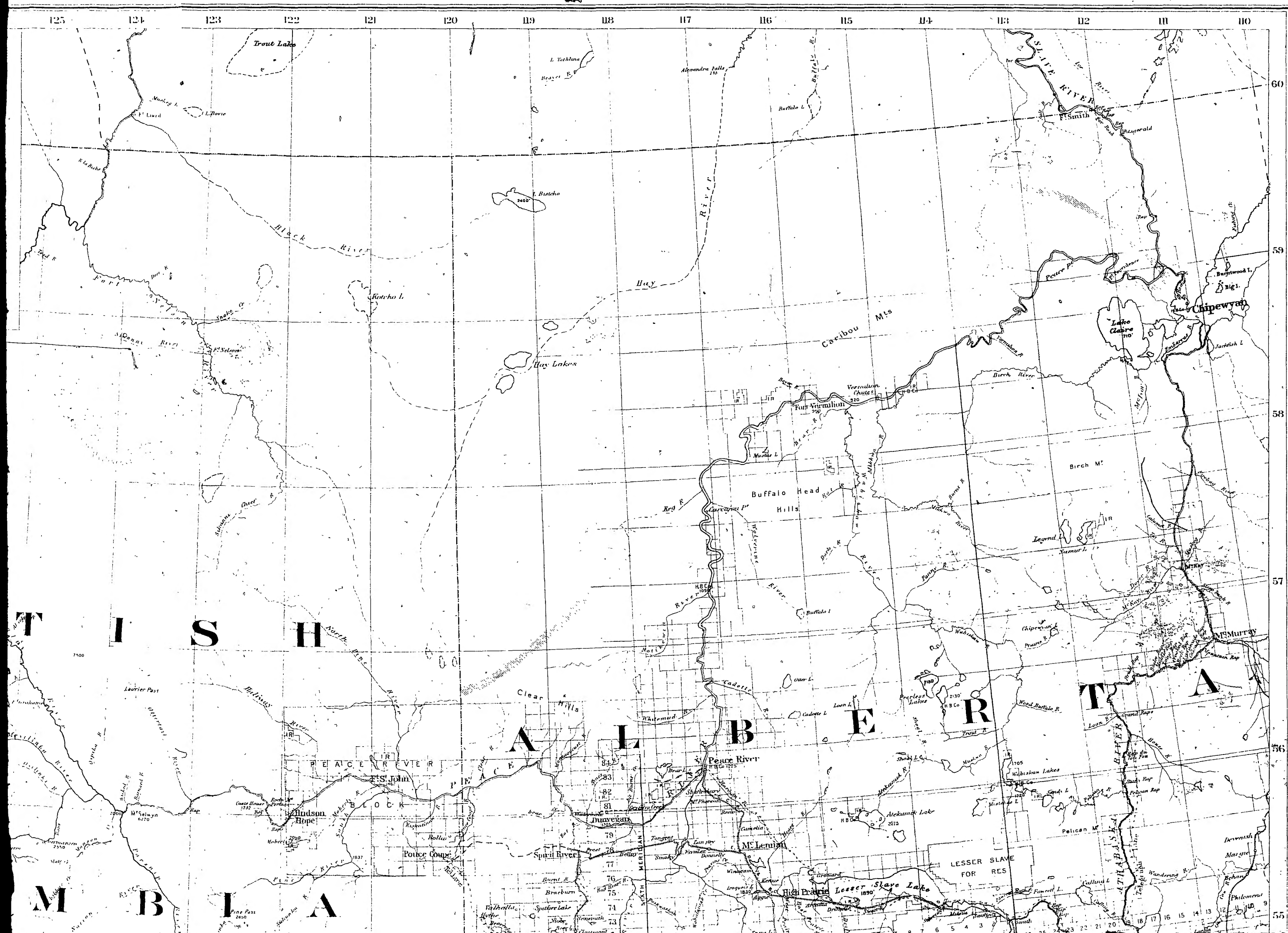
Particulars of provincial legislation affecting the district, game regulations, schools and other matters controlled by the local governments, are to be obtained on application to the Publicity Commissioner, Edmonton, Alta., or in the case of British Columbia to the Provincial Bureau of Information, Victoria, B.C. Additional sources of information are shown on the following table:—

TABLE of Miscellaneous Information.

Subject.	Apply to.
Freight and Passenger Rates and Timetable E.D. & B. C. Railway and Central Canada Railway.	The Twin City Transfer Co. Agents E.D. & B.C. Ry. Edmonton, Alberta.
Steamboat Rates and Time Table.	The Transportation Mgr. Peace River Development Corporation, Peace River, Alberta.
	The Transportation Mgr. Hudson's Bay Company, Peace River, Alberta.
	Peace River Navigation Co., Ltd., Peace River, Alberta.
Information <i>re</i> business opportunities.....	The Secretary, The Board of Trade, Peace River, Alberta, or Spirit River, Alberta, or Grande Prairie, Alberta.
Information <i>re</i> Homesteads open in a particular township.	The Agent of Dominion Lands in whose district the township lies.

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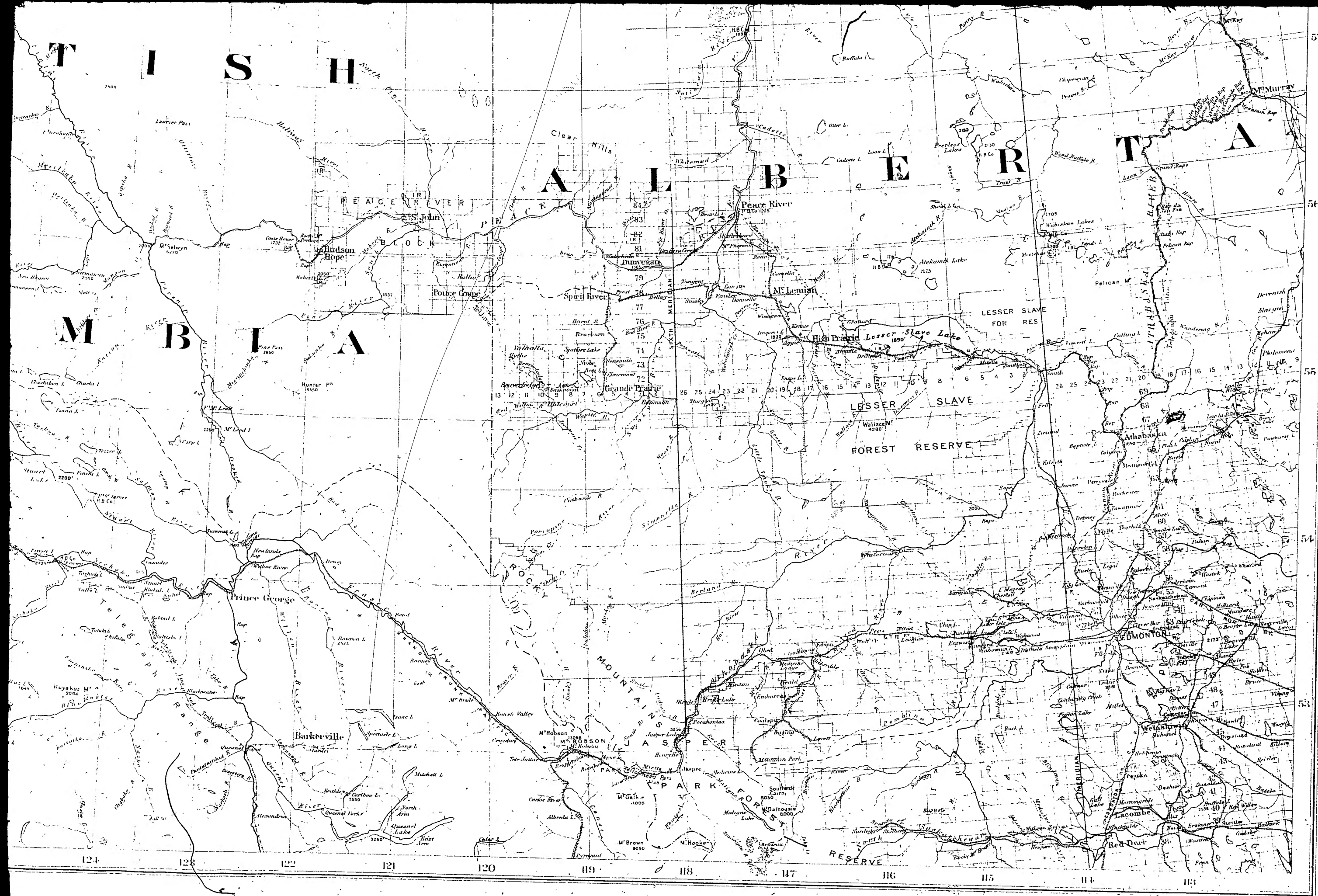
Scale 35 miles to 1 inch.



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